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IN RESPONSE TO PUBLIC DEMAND, THE SEPTEMBER 1959 ISSUE OF "AUDIOVISUAL INSTRUCTION" IS REPRINTED HERE WITH UPDATED COMMENTARY. AN INTRODUCTION BRIEFLY DISCUSSES PROGRESS IN ACCEPTANCE AND IMPLEMENTATION OF AUDIOLINGUAL METHODS IN LANGUAGE IMSTRUCTION AND STRESSES THE IMPORTANCE OF PRESERVICE AND INSERVICE TEACHER TRAINING. USING THE QUESTION-AND-ANSWER TECHNIQUE, THE BODY OF THE ARTICLE CONSIDERS THE ROLE OF LANGUAGE LABORATORIES AND ELECTRONIC EQUIPMENT IN THE AUDIOLINGUAL APPROACH, COMMENTING IN DETAIL ON EQUIPMENT, COSTS, ROOM LOCATION, MATERIALS, AND TECHNIQUES, AS WELL AS ON TEACHER TRAINING, ADMINISTRATIVE PROBLEMS, AND EVALUATION CRITERIA. AN ADDENDUM OF UPDATED COMMENTS FOLLOWS EACH QUESTION AND ANSWER, AND A NOTE ON PROGRAMED INSTRUCTION CONCLUDES THE DISCUSSION. THIS ARTICLE APPEARED IN "AUDIOVISUAL INSTRUCTION," VOLUME 7, NUMBER 9, NOVEMBER 1962, PAGES 602-623. (AB)

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EDITOR'S NOTE

IT is a pleasure to present this issue of AVI to members of the NEA Department of Foreign Languages, as well as to regular readers. We in DAVI appreciate the new department's cooperation and interest in our common problems.

When the DAVI Editorial Board met last April they elected to devote a fall issue to foreign language teaching with emphasis on the advances made since our historic issue of September 1959—"What Do We Know About Teaching Modern Foreign Languages?" It was not our original intention to reprint the entire 1959 issue, but many sources informed us that the content was still useful and in demand, and needed only to be updated. This is a tremendous compliment to the editors of 1959 —Elton Hocking and Frederick Eddy, and to the writers of that issue.

We owe a debt of gratitude to Dr. Eddy who undertook the second big task of updating the 1959 comments. Readers will please note that the 1959 material is reprinted here in black, while Dr. Eddy's updating comments for each of the 45 questions are in blue.

We are also grateful to Genevieve S. Blew, interim chairman of the Department of Foreign Languages, and Joseph C. Hutchinson, interim secretary of the Department, who developed the plans of the Editorial Board in cooperation with the DAVI national staff. The excellent choice of new contributors to this issue is the result of their suggestions.

Copies of this issue are being mailed to all members of the Department of Foreign Languages, and additional ones are available from NEA Publications Sales at 50 cents apiece. (Cash must accompany orders of less than $2.)

We hope that FL 1962 will be even more useful than the 1959 issue which has long been out of print despite a large overrun.

—Anna L. Hyer

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1959

THE TITLE of the September 1959 issue of AVI was, "What do we know about teaching modern foreign languages?" In November 1962 that question prompts two others: (1) What more do we know in 1962 than we knew in 1959 about teaching modern foreign languages for effective communication? (2) How well have we been applying what we know to the actual teaching and learning situation all across this broad land?

The answer to the first question is, happily, that some members of the profession stated rather accurately in 1959 the general nature of the "180-degree turn," the "revolution" then beginning. In the past three years reports by researchers and investigators have confirmed the general direction of our efforts, correcting it in detail where necessary, and have begun to fill in the detail of theory and practice in a most workmanlike way. As a result, our best professional thinking and practice is now reflected in a solid, vigorous literature making possible teacher training, materials preparation, and equipment specification according to very high, but realistic, standards, and leading to FL proficiency for most of our students as a realistic and achievable goal. A glance at the Orr bibliography and the articles contributed to this issue will provide illustrations.

As we think about the implications of the current American revolution in the teaching and learning of modern foreign languages, it is important at this point to define just what the revolution is.

"Better still, let us begin by saying what it is not. It definitely is not the use of electro-mechanical devices, audio, visual, or both, in foreign language teaching. The use of the machine is another revolution taking place at the same time as the more important methodological and linguistic revolution. And unfortunately the mechanical revolution is too often confused with, or taken for, the methodological and linguistic one. To say this, of course, is in no way to diminish the great contribu-

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Revisited

Frederick D. Eddy

tions of the mechanical revolution; it is only to put them in perspective. The teacher who has a language laboratory or a projector is easy to identify. He can be spotted immediately with the goods. But it is not so easy to pick out at first glance the teacher who is fully aware of the dimensions of the methodological and linguistic revolution and who is taking his full part in it. Only this latter teacher . . . will be capable, as we develop more and more sophisticated teaching and learning techniques, of programing the machines and of using them to advantage. Unless his teaching and linguistic skills plan and guide the use of the machines, all our electro-mechanical improvements will be ineffective.

". . . How do we identify this linguistic revolutionary? We simply judge him by his works. The activities of his students in class stem from his having digested certain basic concepts: *first*, that speech and writing are two very different things; *second* that the hearing and speaking skills are basic, coming first in time and importance since a primary goal of his teaching is use of the language in communication; *third* that good grammar habits are first learned through pattern practice and analogy rather than through analysis and explanation; *fourth*, that the reading and writing skills are learned and used to greatest effect and satisfaction if they are solidly based on the hearing and speaking skills; *fifth*, that the hearing and speaking skills are developed by presenting a small amount of authentic material at a time, drilling it until it is mastered, and practicing its manipulation so as to achieve ever greater freedom in the use of its structure and vocabulary." (*See* Ed 34-35.)*

Fortunately there has been the educational vision and the professional and technical competence to keep the two revolutions running helpfully parallel in mutual stimulation and enrichment—at least on the planning and publishing level. Many publications have contributed to this difficult operation, among the first being the Council of Chief State School Officers' *Purchase Guide* in 1959 and its *Supplement* in 1961. (*See* CCSSO.) Of more recent date is Hutchinson's invaluable *Modern Foreign Languages in High School: The Language Laboratory*. (*See* Hu.)

Soon to appear, in late 1962 or early 1963, is another admirable work, this one by Alfred S. Hayes. Its proposed title is *Technical Guide for the Selection, Purchase, Use, and Maintenance of Language Laboratory Facilities*, and it is being produced under a contract between the U. S. Office of Education and the Electronics Industries Association. The history of this guide is a hopeful augury for similar efforts in the future. A committee of Office of Education staff members representing Titles III, VI, and VII of NDEA prepared the educational rationale and criteria which served as the basis for a cooperative study of technical considerations by representatives of the EIA. This joint effort by representatives of education and the electronics industry, a new publishing high in the field, will bring into sharp and definitive focus many pedagogical and technical matters affecting the ultimate consumer—the student of modern foreign languages. (Ha 3.)

In short, on the research, planning, and publishing levels, in some areas of materials preparation, and in actual practice in some favored areas of public and private education, the profession has been doing very well indeed. But now we turn to the second question posed above: How well have we been applying what we know? To use the familiar comparison of the iceberg, the publications, the meetings, and the favored areas are what we all see and talk about. Unfortunately, below the surface, almost unrealized by all but the few who observe widely, is a great mass of teachers at all levels, grade school through college, whose teaching and whose students are only vaguely touched, or completely untouched, by all this progress. The audio-lingual skills are not for them. *Worse yet, the FL graduates of many teacher training institutions swell the submerged number every year.*

There remains a tremendous job of effective preservice and inservice teacher training to do, and one wonders how it will ever be done. There is not one state FL supervisor who does not ask himself this question every day. One answer may be joint professorships of foreign languages and education and close interdepartmental cooperation in teacher-training institutions, this for pre-service training; another, for inservice retraining, may be traveling teams of State University

*At the end of the present article (on page 623) appears a short list of items each of which has an abbreviated key (example: Hu) in a column to the left. In the text of the article the key, plus page numbers or chapter headings, is given in parentheses as a bibliographical reference. For example (Hu 26-29) refers to pages 26-29 in Joseph C. Hutchinson's *Modern Foreign Languages in High School: The Language Laboratory*. Full bibliographical information on each item is given in the Orr bibliography beginning on page 644. In the short bibliography of this article certain items are starred (example: *Hu) indicating material of greatest usefulness, to be read first and kept handy for reference.

professors, demonstration teachers, and technicians giving their desperately needed courses and workshops at the grass roots, in localities far from the university campus.

To say that the need is desperate is to recognize the extent of the job still to be done. One must recognize at the same time the quality and quantity of what is being accomplished. Almost every state, using Title III NDEA matching funds, is upgrading or plans to upgrade its FL teaching personnel and syllabi. Spotted across the country are several adequate, full-scale teacher training programs, and others are planned. There is also the admirable Foreign Language Institute Program of Title VI NDEA. But the 4000 teachers it trains each year represent at best a kind of holding operation against the inadequacy of much college and university FL teacher training.

[The Language Institute Program for 1963-64 will be announced in mid-December. This Program, conducted under Title VI of the NDEA, represents a unique opportunity offered by the Federal Government to elementary and secondary school teachers of modern foreign languages to improve their preparation. Language institutes are set up to effect measurable improvement of the teacher-participants in listening comprehension, speaking, reading, and writing of the target language, in awareness of the culture of the country whose language they teach, in language analysis, and in professional preparation. They are geared to accommodate teachers at all levels of audio-lingual proficiency from minimal or below to superior. Summer institutes last an average of seven weeks; there are also academic-year institutes.

Last summer 72 institutes were held at various colleges and universities throughout the country. An additional eight second-level institutes were set up overseas for selected teachers who had already completed a first-level institute in this country: two in France, one in Germany, three in Latin America, one in Puerto Rico, and one in the Soviet Union. It is expected that the number of overseas institutes will be increased for summer 1963. Over 4,000 teachers attended language institutes last summer, and still others are enrolled in the five academic-year institutes presently in operation.

No tuition or other fees are charged for institute attendance. Public school teachers are eligible, upon application, to receive a stipend of $75 per week while in attendance and an additional $15 per week for each dependent. Private school teachers, while not eligible for stipend or dependency allowances, receive tuition remission and pay no fees.

To receive information about the 1963-64 program when it becomes available, interested teachers should write to: Language Institute Section, Language Development Branch, U. S. Office of Education, Washington 25, D. C.]

Hopefully, the acute needs just mentioned will stimulate more state and local school boards and school and teacher-training administrators to do some hard thinking and courageous acting in the critical area of state and local teacher training. It takes conviction, competent personnel and adequate funds, but given those the job can be done, and done well. Consult, for example, the Birkmaier article in this issue, to take the one nearest at hand.

A strong local FL program usually owes much of its effectiveness to a foreign language coordinator in the school system who oversees the methods, content, and especially the continuity of all offerings from grade school through senior high. A strong state system is usually taking full advantage of the federal monies available for the state FL supervisor and inservice training programs provided under Title III of NDEA, and of other federal aids to upgrade the teaching personnel and the program.

Having taken that look at the realities of the cold, cold world, we get back to more pleasant matters. The up-dating comments on the September 1959 issue of AVI which follow make no pretense of being complete or authoritative. In most instances they merely scratch the surface, suggesting in a few words what can be pursued with profit in the literature of the past three years or more. If they attain one simple objective they will advance considerably the cause of foreign language education: that objective is to convince every reader that he should procure immediately copies of the *Purchase Guide*, its *Supplement*, Hutchinson, and a copy of Hayes as soon as it is available. That is the first step. The second is that he should thoroughly read, mark, learn, digest, and *use* the wealth of sound linguistic, pedagogical, and technical information contained in those four works.

All four represent collected and harmonized experience and thinking over a period of at least three years by scores of experts in a dozen different fields: FL teachers, linguists, electronics engineers and technicians, specialists in audiovisual and other branches of education. As single volumes or taken as a set of four handbooks, they are witnesses to how solidly and rapidly, with well-directed teamwork, a whole new professional area can be explored and codified. All four should be on the desk of every person responsible for the rationale, planning, implementation, or operation of a modern foreign language program and its laboratory facilities. The four volumes cover in a systematic way all of the areas opened up by the 45 questions and answers of 1959, plus a great deal more. They are ready to serve you. They are *reference books*. Don't just read them once, have them on your desk and *use* them.

Acknowledgements

I have limited references and citations where possible to the four publications just mentioned. That I am indebted to many others goes without saying. In addition, I have had the benefit of personal help from the following: Miss Esther M. Eaton, Dr. A. Bruce Gaarder, Dr. D. Lee Hamilton, Miss Mary E. Hayes, Dr. Hutchinson, Dr. Marjorie C. Johnston, Dr. James Spillane, all of the Office of Education; Mrs. Genevieve S. Blew, supervisor of instruction, modern foreign languages, Maryland State Department of Education; Mrs. Evangeline Galas of the Horace Greeley High School, Chappaqua, N.Y.; Mr. Hayes, head of research and special projects at the MLA Center for Applied Linguistics; and Dr. Robert Lado, dean, Institute of Languages and Linguistics, Georgetown University.

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The 45 questions and answers on these pages are reprinted from the September 1959 issue of AUDIOVISUAL INSTRUCTION. *The 45 addenda (in blue) are updating comments by Dr. Eddy.*

Some Basic Concepts

1

Q *Upon what basic concepts of language learning is the use of electronic equipment predicated?*

A The primary concept is that effective language learning means the establishment of audio-lingual skills for communication, that is, of effective automatic responses to speech situations. Two of the terms used to describe the successful acquisition of these skills are "near-native pronunciation" and "good grammar."

The process of learning these skills involves alert listening and careful repeating after authentic models; abundant drill under competent guidance; carefully graded oral exercises maximizing the chances of correct student response and minimizing the chances of error; immediate correction of error when it does occur, followed by drilling of the correct form again; finally, for older students capable of handling the machines profitably, self-recording followed by attentive comparison with the model voice for self-criticism and correction. All of these activities prepare for the focal point of the entire procedure, which is to engage in meaningful conversation in the foreign language. The effectiveness of the drill activities for the individual student and for the group is multiplied many times by the proper use of good materials and electronic equipment. In fact some of the activities just described are impossible, or at best very time-consuming, without the machines.

It is axiomatic that the drill activities will be most rewarding when aided by a thoroughly trained teacher, and by high quality sound equipment which provides the learner with crystal-clear reproduction of the model and of his own voice.

It is generally assumed that pupils in the lower grades require personal instruction to a greater degree than older students. Electronic equipment can serve to provide good oral models for imitation by small children, but the further use of equipment should probably be reserved for older students. —F. E. & E. H.*

ADDENDUM 1: On the subject of the last paragraph, electro-mechanical equipment for grade-school children, Hayes makes a similar statement, but suggests that "continued research and experimentation on the use of such equipment in the elementary school should be encouraged, however, since concrete evidence of the way in which its effectiveness differs for different age groups is almost wholly lacking." (Ha 3, Ch. III.)

To the list of basic concepts should be added the

*Frederick Eddy and Elton Hocking.

following: (1) *Small increment.* To maximize the chances of correct student response, new elements are introduced into the learning process by very small and simple stages. Near the beginning of the second paragraph above, after "guidance," read: "audio-lingual exercises so constructed that a very high percentage of correct student response is practically assured, and error is spotted and corrected at once." Application of this principle requires material so carefully constructed, abundant, fast-moving, and repetitive that machine drill is almost a necessity. (See the note on programed learning on page 623.) (2) *Testing.* The acquisition of audio-lingual skills is powerfully aided by proper audio-lingual testing. Here again electronic equipment is indispensable to both student and teacher for administration of the test, and evaluation and study of the results. (*See* Questions and Addenda 43, 44, 45.)

2

Q *What is a language laboratory?*

A A language laboratory is a complete electronic installation which provides a booth, headset, microphone, sufficient recording facilities for every student in the room to record frequently, and monitoring facilities for the teacher. Normally the teacher is provided also with a recorder-playback, headset, microphone, P.A. system, and frequently a "console" or switchboard for monitoring and intercommunication with individual students. Visual facilities include a projection screen, 16mm film projector, slide and filmstrip projector, and perhaps opaque and overhead projectors. The movie projector should be as quiet as possible, with good quality of sound that can be piped into the sound system.

The "library-type" laboratory is planned to enable students to enter at all hours and ask for any tape, as they would ask for a book in the library. Such a laboratory must therefore be supplied with several taped copies of every recorded lesson, just as the reserved-book room of the library must have several copies of each book that the students are required to use. Each student's instrument is normally a two-channel tape recorder. The channel which plays the recorded lesson is not erasable; the other channel records the lesson and also records the student's responses. He can erase this channel whenever he wishes.

The advantages of this arrangement are: (1) The student may come to the laboratory whenever he chooses and proceed at his own pace; (2) The laboratory may be supervised by a non-professional person such as a technician or student assistant. The disadvantages: (1) The student's "own pace" may be ill-chosen, and as with reserved book assignments, attendance may be erratic—sometimes with waiting lines and sometimes with no customers—so that elaborate scheduling involving a time clock, etc. becomes necessary; (2) The teacher's physical absence may induce a corresponding absence of interest and cooperation. Students are quick to sense this, and the poorly motivated ones may not work as hard when supervised by a mere employee; (3) A large supply of tapes must be purchased, and several dubbings of each recording must be made, cataloged, and kept available; (4) Two-channel instruments cost about 20 percent more than single channel.

The "group laboratory" follows the classroom precedent of having all students do the same thing at the same time. Teacher and class go to the laboratory, as they do to the classroom, at the regularly scheduled hour. Since the entire class is studying the same lesson, only one recording of it is needed. This is played at the teacher's control center and is piped into all booths, which therefore need only single-track instruments and a tape which remains there hour after hour. On this tape is recorded all that the student hears and says, and parts of it are played back whenever the teacher chooses. The assumption is that pace, replay, and indeed all activities in the laboratory should be determined and supervised by the teacher in person.

The advantages of this arrangement are: (1) simplicity of scheduling and operation; (2) integration of all aspects of the course by reason of the constant presence of the teacher; (3) little or no dubbing of recordings; (4) savings on cost of tapes and instruments.

The disadvantages are that (1) all students must work at the same pace and adjustments can be made only in extra "help sessions"; (2) some teachers may prefer not to be involved in laboratory activities; (3) the teacher's time is more costly than that of an assistant.

Less elaborate installations are:

1. *Practice room.* Player, microphone, earphones, amplifier, and loudspeaker make up the minimum equipment which provides for group listening and choral response.

2. *Listening installation,* using part of the library or study hall. Since quiet is necessary, there is no loudspeaker and no oral response, only listening through earphones. Supervision is usually supplied by the teacher or librarian in charge.

3. *Electronic classroom.* This is a standard classroom, equipped for individual listening and choral response. Equipment consists of individual earphones for students and a player (with cover and lock) for the teacher. Convertible booths are desirable. Another option: activated headsets which amplify and direct the student's voice into his earphones while he is speaking. Still another option is a console for the teacher who may thus monitor any student and perhaps talk with him privately. Using all these options, the electronic classroom lacks only an adequate number of individual recording facilities for students in order to qualify for our definition of the language laboratory. —E. H.

ADDENDUM 2: An attempt was made in the 1959 *Purchase Guide* (CCSSO 1959, p. 265-71) to establish names that would denote certain types of installation having fairly well-defined items of equipment and functions. While the names defined above are still meaningful, the term "language laboratory" has become so widely and loosely used as to be universally understood in a vague way, and thus universally misleading. Hutchinson observes that "actually the term has become almost generic and has at times been used to mean an idea, a method, a technique, a special room, a machine, or various types of electronic systems. There are actually so many facets to the term that it is as subject to

misuse or misunderstanding as the term 'audiovisual.'" (Hu 4-5.)

Hayes divides laboratories into two groups, namely *laboratory* and *class* [group] systems and gives the following definition: "A language laboratory is a classroom or other area containing electronic and mechanical equipment designed and arranged to make foreign language learning more effective than is usually possible without it." (Ha 3, Ch. I.)

Current trends seem to be as follows: in public secondary schools, toward class systems; in universities, colleges, and private schools, toward library systems or a combination of library and class.

3

Q *How long has electronic equipment been used for language teaching? How extensive is the use?*

A Electronic equipment for language teaching is a recent development, still experimental, but gaining popular acceptance as an integral part of language learning facilities. Language teachers have always made some use of audiovisual materials, generally as a supplement to class work. The intensive language programs during World War II, however, made extensive use of training aids—both audio and visual. This was necessary because of the sudden need for persons who could communicate vital information by telephone and who could monitor radio broadcasts in foreign territory—to mention only two of many needs for communication skills. Active drill, as opposed to passive listening, led to a new concept in the use of mechanical and electronic equipment in language learning. Audiovisual materials constituted the language course, not just a supplement to it.

During the war years and following, much discussion centered about the feasibility of adapting certain features of the specialized training programs to regular classroom use, and numbers of schools and colleges began to make modifications in their language programs. The past decade has been a period of lively experimentation. According to a survey made in the school year of 1957-58, two hundred forty colleges and universities and 64 high schools were using electronic installations. At present there is a phenomenal increase in the numbers, both in secondary and higher education. This growth is being stimulated by the provisions of Title III of the National Defense Education Act and by public awareness of the importance of understanding and speaking modern foreign languages.

—MARJORIE C. JOHNSTON

ADDENDUM 3: In 1962 the term "experimental" is no longer applicable; the language laboratory has become as much a part of the American educational scene as the physics or chemistry laboratory, one might even say as the textbook. In 1961 Hutchinson reported these unofficial figures: "about 2,500 secondary schools . . . [and] about 700 colleges and universities . . . having some kind of language laboratory." (Hu 3-4.) His estimate as of October 1, 1962, is about 5,000 secondary schools and about 800 colleges and universities. "Never before in the history of American education has this kind of investment been made in so short a time for technical equipment to be used in instruction. Almost overnight, the American educational system has acquired a whole new technique of instruction which begins with a new theory of teaching languages, extends through the preparation of all kinds of new materials (tapes, books, films) and ends in a laboratory loaded with electronic gear . . ." (TDP 49.)

Experience has abundantly proved the idea that *audiovisual materials constitute the course and are not just a supplement to it.*

Finally, while the language laboratory is no longer experimental, the materials used in it are still in the process of trial and improvement. *See* Addendum 30.

4

Q *Where can we see good language installations in operation?*

A These are the best that I observed on a recent field trip: Pascack Valley Regional School, Hillsdale, N. J. Various types of equipment are employed here: tape recorders, tape recorders with magnetic discs, built-in analyzers (activated headsets) and listening station. The laboratory is being used by Latin classes as well as French, Russian, and Spanish classes.

Choate School (private), Wallingford, Conn.

J. Sterling Morton (West) High School, Berwyn, Ill. A language teacher who does not know Italian is conducting an interesting experiment using tape recordings. She is learning Italian with the class.

Brighton High School, Rochester, N. Y. Electronic classroom, not a language laboratory.

—ELAINE M. HARDIE

CONSULTANTS' NOTE: For other addresses, consult *Foreign Language Laboratories in Schools and Colleges*, by Marjorie C. Johnston and Catharine C. Seerley. Equipment manufacturers and local leaders in the modern foreign language field can also help you identify well equipped and well run installations.

ADDENDUM 4: The best sources of information on secondary school FL labs in your locality are as follows: *For public junior and senior high schools,* the foreign language supervisor or consultant (exact title varies from state to state) c/o the state education department in the capital city. *For private schools,* the National Council of Independent Schools, 84 State Street, Boston 9, Massachusetts. (*See* Ma.) *For private or parochial schools* under religious organizations, the local minister, priest, or rabbi, through whom you can get the name of the regional director of education. For information on nearby college and university labs, consult your state FL supervisor (see above).

5

Q *What functions do visuals serve in modern foreign language teaching?*

A Visuals are, broadly speaking, the pictured presentation of realia. Their value has seldom been questioned. Projected on a screen, the pictures are large enough for all students to see easily, and the problem of logistics has been solved by the camera. The motion picture film with foreign language sound track can be a more authentic foreign experience than the average tourist trip.

This experience of the foreign culture is, when well planned, no less valuable educationally than the linguistic aspect of the course. However, both aspects should be combined, thus reinforcing and completing each other. Even if the language alone is sought and taught, the visual context is uniquely valuable for it identifies the referent without recourse to English; moreover the identification is culturally authentic, which the printed word often is not. Thus the picture of a French loaf of bread is more authentic than the dictionary, which merely states that *le pain* is "bread." To our students, this means the familiar American machine-made product. Although theoretically "language is sounds," in simple conversations our language commonly refers to what we see around us. Elementary language learning can be greatly facilitated by this visual context, and visuals can supply it. —E. H.

ADDENDUM 5: There are two schools of thought in this area. One is represented by Elton Hocking on pages 642-43 of this issue. He, and many others, believe that abundant use of visuals is absolutely indispensable to effective FL teaching and learning at all levels.

The other point of view is represented by Nelson Brooks. His thesis is that "*audio* refers to what is central in language [receiving and sending sound signals] while *visual* does not. . . . The essence of language is that it is a communication system entirely independent of a source of light . . . if this were not true we could not talk by telephone [or in the dark]. It is training in the ability to talk without visual and graphic aids that the foreign language learner both desires and needs, and which he is quite generally denied in the language classes of our schools and colleges." Brooks would very carefully delimit the role of visuals: "The contribution of visual aids to the learning of a second language is essentially in the form of drawings and pictures that present situations about which talk can center and photographs that represent authentic details of the target culture. A carefully planned program of materials should include wherever possible a use of visual aids that develops the situational and cultural elements as only pictures can and that does not interfere with the audio-lingual skills nor with the use of language as symbol as well as sign." (Br 201-203.)

6

Q *Can a young student learn efficiently without watching as the sounds are produced?*

A At one time I would have said that students cannot learn the sounds of a foreign language without watching how they are produced, but after having worked with children and specially prepared children's records I have found that their ears are more sensitive than adults' to the subtler sounds of language. I still want to believe the other to be true, but recent experiences have made me "turn over a new leaf." Visual aids had better be used in developing cultural concepts rather than in picturing the "mouthing" of sounds.

—Emma Marie Birkmaier

ADDENDUM 6: It is important to define the term *efficiently* in the question above. If we define it to mean "in a relatively short time, reaching sufficient control of the sounds for satisfactory communication," the answer is yes, much more efficiently than most adults. If, however, the goal is near-native control of the sounds, then hearing alone is not enough, according to the report of a careful and comprehensive year-long study of this question by Mrs. Evangeline Galas (Ga.) *See* Question 38 and the Randall article in this issue.

7

Q *What is the best advice at the present for teachers of modern foreign languages?*

A A language teacher's program can be summed up in these formulae: (1) Get oral command of your language through study and practice here and abroad; (2) Seek out and experience personally the best thinking and the best teaching you can find in your field—at professional meetings and visiting other teachers' institutions; (3) Start with a simple machine—a tape recorder, for example—and use it, first by yourself and then with your class, until you are thoroughly familiar with it; (4) Put into practice in your classroom the best teaching and drill of which you are capable as soon as you have a clear idea of how to do it. *Don't put it off.*

All of these activities, of course, can be started today, simultaneously, if you will. They can be inspired and undergirded by professional reading. (See Bibliography.) We recommend in particular: Patricia O'Connor's *Modern Foreign Language in the Secondary School: Prereading Instruction;* the 1959 Northeast Conference *Reports of the Working Committees;* and the Council of Chief State School Officers' *Purchase Guide.* —F. E. & E. H.

ADDENDUM 7: Under (1) above, opportunities for teachers' foreign study and travel, completely subsidized or at very low cost, are becoming more frequent and more attractive every year. To the four suggestions above, add No. 5: attend an NDEA summer or academic-year institute where, at no cost to you whatever (no participant pays tuition and public school teachers receive a stipend of $75 per week plus $15 for each dependent) you are given some of the world's best foreign language teacher training. (*See* material in brackets, page 604, and bibliography item LaIn.) For reading, study, and reference, see the bibliography at the end of this article, and the bibliographies cited by Orr on page 644.

Administrative Problems

8

Q *What is the best advice for administrators and school boards who want to improve their language programs?*

A Too many teachers, on the one hand, and administrators and boards of education on the other, are content to settle on each other or on the taxpayer the blame for an unsatisfactory foreign language program. But it is the administrators and boards who really have it in their power to set the stage for the kind of language program that the national interest demands.

Administrators and boards can make a significant contribution by: (1) becoming informed from reliable sources; (2) taking the initiative in cooperative planning with teachers and citizens to make effective language training available; (3) encouraging teachers to throw off the shackles of superimposed planning, testing and evaluation based on traditional methods of teaching, and to experiment boldly and confidently with teaching modern languages for communication; (4) encouraging, even subsidizing, the further training or the retraining of teachers in oral competence and teaching methods; (5) providing for continuous planning, careful articulation, and constant evaluation under the guidance of a competent foreign language coordinator, and finally, (6) providing sufficient time in the students' and language teachers' schedules to implement the program.

—ESTHER M. EATON

ADDENDUM 8: To Miss Eaton's concise and realistic statement, I add two items: (7) providing class and lab periods uninterrupted by the busy mechanics—all in English—of running a school: announcements made over the PA system or otherwise, students excused, schedules changed, etc. This plea of inviolability should be made for any class, but for the foreign language teacher and learner it is crucial: success depends entirely on long, unbroken sequences of FL practice in the "cultural island" of the FL class and laboratory. Breaking into this delicately and precariously held island is much more destructive than interrupting a class conducted in English. Good administrators, aware of this problem, see to it that such interruptions are held to a minimum. (8) This is a kind of negative summary of all that precedes: there is nothing quite so frustrating and wasteful in a school system as the newly motivated and trained FL teacher forced to revert to his ineffective former methods for lack of administrative support in getting rid of poor texts and materials and acquiring new ones, resisting the pressures of less venturesome colleagues, and putting his newly acquired competence to use.

9

Q *Do electronic aids reduce the need of staff or increase it? Do they require specialized competence of the teaching or supervisory staff?*

A While audio aids help make language teaching more effective, they definitely do not reduce the need of staff. If drill periods are not scheduled by classes or groups under supervision of classroom teachers, then a laboratory assistant, technician, or released-time teacher will have to be provided, thereby increasing personnel.

Lack of integrated tapes and texts at the present time demands teachers proficient in the oral skills who have a thorough knowledge of the methods and techniques required to develop an effective audio-lingual approach to language learning, as well as some degree of competence in operating and maintaining electronic equipment. This knowledge may be obtained through reading, attendance at audiovisual workshops, language institutes, or visits to good installations already in operation.

—ELAINE M. HARDIE

ADDENDUM 9: Where equipment is concerned, most suppliers continually strive for greater simplicity of controls and greater durability and flexibility. But this opens up the possibility of more ambitious and more effective techniques; consequently some of the time that the FL lab director and teacher used to spend repairing and adjusting machines they now spend in planning and implementing better ways to use them. Essentially the same thing is true of materials. Good sets are now coming on the market. This means fewer tapes and visuals for the teacher to make, but it also means more sophistication and care in using the material supplied commercially. Thus Miss Hardie's answer is still valid: electromechanical aids normally do not reduce the need of staff, and they may increase it. In any case, properly used, they make teaching and learning much more effective.

10

Q *Doesn't electronic equipment require additional special personnel such as an assistant to supervise students, a special maintenance overseer, etc.?*

A-1 In most cases it is the teachers who do all the work. There is no use dodging the hard truth that the installation of electronic equipment puts a greater burden on the teachers the first year or so while new materials and procedures are being developed. At the same time it makes their efforts more effective by providing the means for amazing improvement in the student's performance. (New teaching materials must be developed if maximum effect is to be gotten from the equipment.)

Teachers should have released time for this work and, ideally, should have assistants for mechanical details such as helping students run equipment, repairing tapes, and running the machines while the teacher does corrective work with individual students. As for maintenance, this is usually done by outside repairmen. The need for an assistant and repairman is directly proportional to the amount, complexity and the fragility of the equipment. —W. N. LOCKE

A-2 Student monitors may be assigned for each drill session. They should be responsible for the distribution and filing of materials and the proper use of the equipment. All students should be held responsible for proper use and satisfactory condition of the equipment.
—DON IODICE

ADDENDUM 10: See Addendum 9, and Stack's Chapter VI (St).

11

Q *How can teachers be trained to understand and use the equipment?*

A A thoroughly qualified technician from the equipment company should demonstrate step by step the operation of the machines to all teachers using them. Every teacher should be given the opportunity to operate each machine fully, including making a tape under the direct supervision of the technician. The teacher should also be allowed practice time to become thoroughly at ease with the equipment. He should practice making and playing back tapes before ever using the equipment in class or laboratory. Administrators responsible for foreign language programs should provide inservice training opportunities with consultant help and should urge participation in suitable college courses if at all possible.
—GENEVIEVE S. BLEW

ADDENDUM 11: It is implicit in Mrs. Blew's statement that this job, properly done, begins months—possibly even a year—before delivery of the language laboratory equipment. FL teachers and all administrative and technical staff involved in the program should participate in the following activities to the extent necessary in each case to build a dedicated and knowledgeable team: (1) *statement of objectives*—discussion and conclusions on what language for communication is; (2) *discussion of teaching and learning methods*—how a foreign language is most effectively learned by young Americans; (3) group choice of class and lab *materials and equipment* to implement the objectives and methods; (4) *individual practice* with simple machines and visuals at home and in class to get the feel of the new techniques (disc playback, tape recorder, stick drawings on the blackboard); and (5) *observation and discussion* of class and lab procedures in the home and neighboring schools.

In "A Sample Procurement Specification" given by Hayes, "The seller shall agree to sponsor, as soon as the language laboratory is ready for regular student use, a program of instruction by a qualified language laboratory specialist to all teachers and other personnel involved in the operation and administration of the laboratory. This program shall include the necessary minimum of group instruction, plus a single checkout of each individual in the operation of all equipment. . . . The seller shall . . . instruct teachers in proper microphone technique, including the best talking distance for a given voice and volume setting." (Ha 3, Appendix.)

Hutchinson goes into great detail to describe by word, picture, and diagram the equipment and procedures used in the laboratory. He has nine pages of definitions of terms in English, and glossaries of expressions and terms (instructional procedures, equipment procedures, terminology) in French, German, Italian, Russian, and Spanish with English equivalents. (Hu.)

The most useful chapters of Stack are those in which he describes laboratory equipment and routine. (St, Ch. IV, V, VI.) *See* Question 28.

12

Q *How can administrators organize the teacher's schedule so that he can use the electronic facilities to improve his own oral proficiency?*

A Some improvement can come from the teacher's personal use of the machines. For this he should be given released time in his schedule as well as other encouragements. Some teachers make amazing progress in this way, given good materials to work with, but such teachers are rare. The surest way to increase a teacher's oral competence is through inservice or summer study under excellent instruction, plus study and residence abroad. The use of machines and good materials following these experiences usually results in continued marked improvement. —F. E.

ADDENDUM 12: The past three years have given us many examples of teachers' increasing their own oral proficiency through the use of machines and good materials. This is almost always a result of direction and encouragement given in workshops and inservice retraining programs. In other words, such improvement stems directly from effective supervisory and administrative action. Administrators seeking help on this point should contact their state FL supervisor.

13

Q *How much does it cost to install a laboratory with 25 booths?*

A It depends on the type of installation. The simplest electronic classroom (earphones only at each position, no booths) would probably cost $1700, perhaps considerably less. An electronic classroom with 25 convertible booths, each having earphones, microphone, and amplifier, but no recording facility, might cost from $3000 to $6000. A complete laboratory with individual recording facilities for all students and a master console might cost from $12,500 to $22,000. These are rough estimates depending on quality of equipment and details of installation.
—J. COLLINS ORR, E. S. RANDALL, AND F. E.

ADDENDUM 13: Two opposing general trends are apparent in the current price structure of equipment

and lab installation: on the one hand, the cost of labor and equipment is creeping up along with most other costs; on the other, experience, a growing mass market, and keen competition are forcing the price of some items down. The result is that *quality equipment is not necessarily high priced*. According to Hayes, "it is startling to note that there is seldom more than 15 percent difference between low and high bids on any proposed language laboratory installation. This amount and more can easily be spent in increased maintenance costs." (Ha, Ch. V.)

The question above prompts the observation that 25 student positions would provide adequate laboratory capacity for a very small enrollment, something like 220 students in 10 classes (none with enrollment over 23), and no more than two classes meeting during any one class period. *Adequate capacity provides at least 20 minutes laboratory time for every student daily*. Many schools that "have a language laboratory" are discovering that their coverage is quite inadequate, and that they need to double or triple their lab capacity to present a viable program using up-to-date materials. *See* the formulae on page 278 of the *Purchase Guide* (CCSSO 1959) and Questions 34 and 35.

14

Q *How would a small school which cannot afford technicians meet the problem of maintenance?*

A Preventive maintenance can be learned by teachers or students. Repair needs can be handled by local radio-TV technicians, sometimes by hi-fi enthusiasts among the students. These persons must, however, be willing to acquaint themselves with the equipment and its use. Physics instructors are often willing to help. Factory service can be used when nearby or when no local facilities are available. (See also under Equipment.)

—J. COLLINS ORR AND E. S. RANDALL

ADDENDUM 14: In an early chapter (Ha 3, Ch. III), Hayes establishes as one of the important functions of the professional language laboratory consultant "to assist the institution in setting up a suitable maintenance program." In his Chapter VII on "Servicing and Maintaining the Language Laboratory" (Ha 3) and elsewhere (Ha 1, Ha 2) he has suggested procedures for routine preventive maintenance and emergency service. The small school's personnel and part-time technicians can benefit as much from this material as anyone else.

Room Location Room Treatment and Furniture

15

Q *What is the best location for a language laboratory or classroom? What modifications need to be made in the room before installing equipment?*

A We quote from the CCSSO *Purchase Guide* on "room treatment":

"Each classroom or laboratory in which foreign language instruction and/or practice takes place should have the least possible background noise. This is important for a classroom where English is the language of instruction and recitation, but *for foreign language learning it is essential* that teacher and students *hear every sound distinctly*.

"Therefore these rooms should be located as far away as possible from noise outside the building (heavy traffic, playground, etc.) and inside (main corridor, cafeteria, or gymnasium).

"For efficient operation and supervision of class and laboratory work, it is important that all electronic classrooms (if there are more than one) be located near each other, that the laboratory or laboratories be located near the foreign language classrooms, and that the foreign language office be central to them all.

"Before electronic equipment is installed, the following basic provisions should be made in all classrooms, laboratories, and room areas (even for Listening Installations where possible) that are used for foreign language learning.

"SOUND CONTROL. There are two main purposes here, to insulate from outside noise and to keep inside reverberation at an optimum level. For the latter, an architect should be asked to measure reverberation time, and asked to advise on the proper measures to take. A *classroom* in which a loudspeaker is used even occasionally should be 'deadened' somewhat, but down only to a point that is good for both conversation and amplified sound. A *laboratory* in which little or no instruction or recitation takes place can be 'deadened' accordingly.

"a. *Doors* should be sound-resistant, and should close quietly and automatically.

"b. *Ceiling* should be acoustically treated.

"c. *Walls*, that are parallel blank walls, should be acoustically treated on one wall, or a curtain or drape cover as much as possible of it. Architects designing language classrooms and laboratories are encouraged to consider placing the walls slightly off parallel to reduce the amount of acoustical treatment necessary.

"LIGHT CONTROL. The control of light, too, is important. Here are some points to consider:

"a. *Window space* should be kept at a minimum to avoid distracting sights and sounds.

"b. *Venetian-type blinds* are most satisfactory for darkening.

"c. *Incandescent electric* lighting is least likely to interfere with the audio system, although with properly shielded wires and other components fluorescent lighting can be used.

"d. *Complete darkness* at any time is to be avoided.

"VENTILATION. In view of all the foregoing, and considering the heat generated by electronic audiovisual equipment, it is obvious that forced ventilation and, in many parts of the country, air conditioning as well, is a necessity for all rooms having such equipment."

—F. E. & E. H.

ADDENDUM 15: Hayes has several pages on "Acoustical Treatment" or "Noise Control" (Ha 3, end of Ch. V) in which he gives detailed information on techniques and materials for sound *absorption* and sound *isolation*.

16

Q *How large an area is needed per unit?*

A The floor space required per unit is a variable which depends on several factors. The size of the booth is one factor. Its dimensions will depend on the space needed to house the equipment supplied in the booth. The extent of the writing space and book storage space likewise will directly influence the booth dimensions. The size of the booth in use today varies considerably. If, for example, you should employ a divided table top instead of booths, many more student positions could be made available in a given room area. I would suggest that 30 square feet per station (plus or minus two square feet) would give all necessary space including aisle area, distance between banks of booths, teacher's control area, etc. —J. COLLINS ORR

ADDENDUM 16: The figure given above, about 30 square feet per station, includes all floor space needed in the entire room. The figures under "Layout" in the *Purchase Guide* (CCSSO 1959, p. 276) approach the problem from a different point of view: "The space needed is roughly 24 inches by 30 inches for each student position, not including seating space. There should be enough space between rows so that a student seated at his position does not prevent easy passage behind him."

An important factor in the layout is a clear *line of sight* from each position or booth to the projection screen. Both the *Purchase Guide* (CCSSO 1959, p. 276) and Hayes (Ha 3, end of Ch. V) suggest means of achieving it: rows in chevron formation, curved rows, or the stepped arrangement found in many auditoriums.

17

Q *How important are booths?*

A-1 Like earphones, booths are valuable for two reasons, acoustical and psychological. The exterior of the booth shuts out much of the ambient noise, and the interior, faced with acoustical material, absorbs some of the sound produced by the occupant's voice. Otherwise, bedlam would reign in the room, and satisfactory recording would be impossible. No less important than acoustical isolation is the psychological isolation. Adolescents are particularly self-conscious about making "funny noises" and "funny faces." With their classmates watching and listening, they may refuse even to try. However, booths and earphones provide privacy and stimulate uninhibited effort. Also, they make it possible for all students to perform at the same time, and for the teacher to hear and correct individuals (in person or by intercom) while all this is going on.—E. H.

A-2 On this much-debated question of the booth, a quotation from the CCSSO *Purchase Guide* presents a somewhat different point of view:

"It is possible to spend large sums on equipment, but it is also possible to provide the most essential equipment at relatively small cost. Minimum equipment will make possible the following two student activities: (a) listening to a model voice; (b) continuously imitating or responding out loud as the drill proceeds. Much of value can be added by further refinements, but these two activities are fundamental and indispensable.

"There is some opinion that questions the need for booths, especially for group work and for classes requiring complete supervision." —F. E.

ADDENDUM 17: The *Purchase Guide Supplement* says, "The question of booths or no booths depends on the specific situation. It is related to the question of whether to equip a regular classroom with electronic equipment or to set aside a room as a laboratory. These are decisions which should be made locally to best serve a particular school." (CCSSO 1961, p. 40. See the three paragraphs of discussion and suggestions.) Eventually the teachers should decide what "best serves" their particular school. And one is tempted to conclude after five years and more of debate that, for excellent reasons on both sides, some teachers like booths and some do not.

Equipment and Costs

18

Q *Is it important to purchase "good" or "quality" equipment?*

A An installation should be designed to do the particular teaching job desired. The equipment should be of good rugged construction and characterized by simplicity of operation. However, it is important to make sure that adequate repair and maintenance are available. Personally, I consider repair and maintenance perhaps more important than initial equipment purchase. Specifications should contain very clear and specific statements regarding equipment guarantees and repair and maintenance requirements or provisions.
—WILLIAM B. SANBORN

ADDENDUM 18: See Addendum 13 on the relatively low cost of quality equipment. The experience of the FL teaching profession and the electronics industry supplying the equipment leads Hayes to state at the head of his long chapter on specifications (the italics are his): *"The one technically-based commodity which the chosen system must supply, and continue to supply, is the high quality recording and reproduction of speech.* If this is not achieved, all previous planning will have been in vain." (Ha 3, beginning of Ch. V.) His statements on ruggedness and simplicity (Ch. V) and on maintenance and service (Ch. VII) underline and amplify those made above by Dr. Sanborn.

19

Q *Are tapes superior to commercial discs?*

A Discs, because they are played by physical contact with a needle, get noisy and wear out even with the best of care. Tapes are superior in this respect, and can be played thousands of times without noticeable deterioration of sound quality. Their signal-to-noise ratio and frequency response is better. However, tapes will not

produce good quality sound if they, and the machines they are played on, are not kept in good condition. Tape recordings, unlike discs, can be easily tailor-made to suit one's needs, and can be edited or erased at will. As for the question of finding the exact part to be replayed, some people can "spot" a passage visually on a disc with great ease; others have uncanny accuracy in the same operation using the fast forward and rewind of a tape playback. Some disc instruments have precise measuring devices; some tape players have numbered meters which serve the same purpose. The rapid location of the part sought, on either, is a matter of good equipment, and of experience in handling it.

When it comes to student materials for home study, the advantage of the disc is obvious. Many homes have a disc player, only a few have a tape playback.

—F. E. & E. H.

ADDENDUM 19: Current trends seem to be the following: for laboratory use, tapes (but institutional use of discs is by no means uncommon); for take-home student use, small (six- to eight-inch) discs. *See* the criteria for discs and tapes in the *MLA Selective List* (MLA).

20

Q *Suppose we can't afford recording and playback for every student, is just listening equipment worth installing?*

A Probably, but remember that if your classroom is equipped as a good *practice room*, you will get far more satisfactory sound reproduction from it than from any earphones on the market. A good practice room is acoustically treated, has a good loudspeaker ($25 plus), a tape recorder ($150 plus), or record-player with built-in amplifier ($50 plus), or turn-table and outside amplifier ($75 plus). The only advantage of earphones is to shut out other sounds in the room.—W. N. LOCKE

CONSULTANTS' NOTE: We feel that the last sentence could be amplified to say that earphones induce a compelling sense of isolation or privacy. This psychological isolation is perhaps more valuable than the acoustical isolation. A loudspeaker is considered a public address system; earphones seem to provide person-to-person communication, like a telephone receiver.

On the main point of this question we feel that listening equipment is definitely worth installing if funds are not available for facilities beyond that.

—F. E. & E. H.

ADDENDUM 20: Hayes begins his inventory of systems (Ha 3, Ch. IV) with a list of 12 pedagogical advantages brought by electro-mechanical equipment. Then the systems are described in order of complexity, and to each system is attributed its advantages. The last (most complex) system brings, of course, all 12 advantages. To the first (a simple tape recorder or phonograph with built-in loudspeaker) are attributed five of the 12. To the second (the same program sources but with individual student headphones added) are attributed nine of the 12. Hutchinson's analysis of "Equipment Functions in Relation to Student Learning Activities" does not show this 5-9-12 progression of advantages because it begins with the individual headphones as the simplest type of equipment considered. (Hu 23-35.)

At this point it is important to repeat and underline a quote from the *Purchase Guide: "It is possible to spend large sums on equipment, but it is also possible to provide the most essential equipment at relatively small cost. Minimum equipment will make possible the following two student activities: (a) listening to a model voice; (b) continuously imitating or responding out loud as the drill proceeds. Much of value can be added by further refinements, but these two activities are fundamental and indispensable."* (CCSSO 1959, p. 265.)

And while we are repeating let us say again that *no equipment of any kind is worth buying or using unless the teaching and learning materials fed through it to the students are linguistically and pedagogically the best obtainable. See* Question 30.

21

Q *How important is it that each student in a class be equipped with earphones?*

A Earphones completely cover the ears, shut out ambient sound, and thus prevent distractions. *Good* earphones (not those commonly provided with recorders) transmit sound adequately (up to 8000 cps), although admittedly a superior loudspeaker system will do better. The unique advantage of earphones, in addition to excluding unwanted sounds, is the intimate sense of privacy which they provide. The wearer feels that "this is for me," and is stimulated to respond as he would in a conversation. Such motivation is priceless, and easily justifies the provision of earphones for every student whenever possible. Finally, speaking again of acoustical isolation, earphones insure that every student, no matter where he sits, hears well. —F. E. & E. H.

ADDENDUM 21: See Question 20.

22

Q *How valuable is the activated headset (with microphone) which sends the voice simultaneously and directly back to the student's ears, but without recording and playback?*

A-1 The relative simplicity and low cost of these devices make them attractive. They cost comparatively little per student position, and since the individual students do not have tape recorders, the operating and maintenance costs can be expected to be low. If the best quality components are used, fidelity can be excellent, though in many installations microphones and earphones are of inferior quality, with resulting poor performance. Pedagogically, these installations can be far better than mere listening to a loudspeaker. The earphones give relative privacy so that all students can speak simultaneously. The effect gained is exactly that of a singer in a chorus who uses his hands to cup the sound from his mouth to his ear so he can hear his own voice. This device is in no way analogous to or a sub-

stitute for recording and playing back the sound, as any actor or musician will agree. —W. N. LOCKE

A-2 In reference to the use of activated headsets, the question may be asked: How are the persistent mistakes noted and corrected? This is the function of the teacher or the lab monitor. He can either criticize tape recordings made periodically by the student or he can monitor him as he works, correcting him on the spot or making notes for a personal corrective session. Since hear-back units cost half as much as tape recorders they bring the essential function of the language laboratory within range of the budgets of many more institutions. —GEORGE BORGLUM

CONSULTANT'S NOTE: Even the manufacturers of these devices admit that each student should be enabled regularly to record and play back his own performance. "How often?" is a question that needs an answer based on research. Implicit are other questions: (1) What is the influence of the inevitable hearing-by-bone conduction on the hearing through activated headset? (2) How successfully can various students combine remembering (of auditory stimulus), careful imitative speaking (in response to the stimulus), hearing (what they are simultaneously saying), and criticizing and comparing (with the stimulus model)?

Meanwhile, purchasers of activated headsets should also buy a fair number of recorders and make certain that the activated headsets and microphones are electronically compatible with these and still other recorders to be purchased from time to time. In this way a complete laboratory can be gradually developed, with no waste of equipment. (See also "How often should a student record his own voice?" page 620.) —E. H.

ADDENDUM 22: See Question 20, and then note that when to student headphones are added microphones and amplification for the audio-active headset, this system has, according to Hayes, 10 out of 12 possible advantages.

23

Q *Is a dual-channel tape recorder better than a standard half-track recorder for individual student use?*

A First, a clarification of terms: The ordinary, readily-available tape recorder is standard half-track. This is the machine with which most teachers are familiar. In addition, several companies manufacture a special "dual-channel" recorder which allows two sound tracks to be used simultaneously. For languages, this means that the master voice is found on one sound track, while the student records, compares, and re-records on the second track.

The manner in which the equipment is used will determine which machine is most advantageous. When the students work as a group in the laboratory, standard half-track or full-track may be most economical, provided that the sound of the master voice is supplied to each student recorder by means of a teacher control center. The dual-channel machine is best for individual student work. Inasmuch as the master voice is recorded on one track of the work tape, the student may work independently, at his own pace. He cannot erase the master voice, although he may record and erase his own as often as he wishes. The greatest disadvantage of this machine may be cost: approximately 20 percent higher than an average priced standard machine.

ADDENDUM 23: Hayes discusses at length the advantages and disadvantages of the dual-channel versus single-channel recorders. Advantages are: (1) apparently increased student motivation; (2) effectiveness of the equipment for the student who can accurately observe differences between his own performance and the model and take effective correcting action; (3) usefulness of the equipment in the administration of group speaking tests. Disadvantages are: (1) cost; (2) ineffectiveness for beginning students and others who are not good judges of their own pronunciation; (3) certain time-consuming administrative problems such as provision for pre-recording of the master track and for erasure of the student channel or of the entire set of tapes. (Ha 3, Ch. IV.)

Hutchinson points out the special importance of "active monitoring by the teacher through the intercom during this [breaking-in] phase." It should be noted further that this careful monitoring is essential not only to give a momentary linguistic advantage to the student and to help him handle the machine efficiently. The far more important advantages for teacher and student are that it trains the student in effective FL learning techniques: accurate hearing and retention of the model and of the differences between the model and his own utterance; sure identification of the most important among those differences, and of the points on which he is not sure and needs the teacher's help; effective action to eliminate the important differences (trial utterance, comparison with the model, correction of the utterance, sufficient drill to overlearn the correct form); early re-entry of the correct item in subsequent FL activity; frequent enough re-entry to establish it in his active control of the language. Note that all of the foregoing is usable *in both laboratory and class sessions.* It sounds complicated and technical, but in reality is quickly learned by most students, and makes for fast-moving, highly efficient FL learning.

There are considerable differences, of course, in the need for continued monitoring by students of different ages. After a few weeks of effective monitoring a college student can work independently if he has good materials. For a number of reasons, this can hardly be expected of a seventh-grader. Nevertheless, all beginning students need to know that someone is listening to their efforts who cares about their progress and can help them.

24

Q *What tape speed should be used?*

A-1 This depends on the design of the machine. Most inexpensive tape recorders have better fidelity when played at 7½ inches per second. Some high quality machines provide better fidelity at 3¾ inches per second than others do at 7½; so the best speed depends on the available equipment. —W. N. LOCKE

A-2 A tape recorder gives not only better frequency

response but better flutter and wow characteristics at 7½ ips than the same machine would give at 3¾ ips. A perfectly adjusted and maintained machine at 3¾ ips will give satisfactory results but has no safety margin, so that the slightest "drifting" of the adjustments results in unsatisfactory performance. On the other hand, the 7½ ips speed gives superior performance with a great safety margin, so that even after minor "drifting" of the adjustments, the performance is still satisfactory.

—JOHN H. PERKINS

ADDENDUM 24: *The Purchase Guide* (CCSSO 1959, 214-15), the *Supplement* (CCSSO 1961, page 39) and Hayes (Ha 3, Ch. V) recommend 7½ ips as the standard speed for FL laboratory use, giving essentially the same reasons as those cited above by Perkins. But "if . . . specifications . . . are actually met, 3¾ ips can provide adequate quality." (Ha 3). The *Supplement* explains in detail why the "amount of tape saved" at 3¾ ips is more apparent than real, and how the slow speed frequently lowers the effectiveness of an entire program. Not often mentioned but important—very important for some labs—is the fact that tape handling and editing is done faster and far more accurately at 7½ ips than at 3¾. For example, to find the exact spot to cut to eliminate a noise or mispronunciation from a tape is frequently delicate and time-consuming at 7½ ips. The same problem becomes almost impossible at 3¾ ips.

25

Q *What specifications are recommended for the various items of electronic equipment?*

A We quote the following figures from the CCSSO *Purchase Guide* specifications. For ease of reference and because of space limitations, these figures have been set up here in tabular form. As a result they are incomplete and to some extent out of context. For full information, refer to the specifications in the *Purchase Guide*. The figures represent reasonable expectations, considering the fluid situation at present. Higher standards may be specified in later editions of the *Guide*. —F. E.

Item of Equipment	Frequency response in cps. At least:	±db:	Flutter & wow, Not to exceed:	Harmonic distortion. Not to exceed:	Signal-to-noise ratio. At least:
Amplifier, pre-amplifier (Student)	75-9000 *50-12,000	2 2		3%	50 db
Amplifier (Control center)	50-12,000	2		2%	50 db
Disc playback (Phonograph)	50-12,000	2			
Earphones	100-8000				
Loudspeaker	75-9000 *50-12,000				
Microphone (Master recording)	50-12,000				
Microphone (Student)	75-9000				
Tape recorder (Master)	50-12,000	2	0.3% *0.2%	2% *1%	45 db *50 db
Tape recorder (General use)	75-9000	2	0.4%	3%	45 db
Tape Recorder (Student)	75-9000	2	0.4%	3%	45 db

*Preferable

ADDENDUM 25: See Addenda 13 and 18 on cost and high quality. Specifications are the yardsticks by which we attempt to define "high quality." Other less precise but very effective means have been described to complement and reinforce the specifications and to test a component or a system under operating conditions. See Pierre Delattre's "Testing Audio Epuipment by Ear." (De). Hayes devotes his entire Chapter VI to "Testing the Language Laboratory." (Ha 3).

Into the writing of specifications has gone an unbelievable amount of experience, searching discussion, laboratory testing, field testing, meticulous writing, and agonized re-writing. It is not possible in this limited space to even mention the highlights or list specific pages. The reader is simply referred again to the *Purchase Guide* and *Supplement* (CCSSO 1959 and 1961), and especially to the long Chapter V in Hayes where not only the specifications but also the reasons for them are stated most clearly and readably. (Ha 3).

From the introduction to that chapter I have already quoted in Addenda 13 and 18 two important passages. At this point one is tempted to quote pages more, but the following will have to suffice: "Most manufacturers try to deliver a quality product despite competitive pressures. But because of the nature of the commodity being sold, it is easy for these competitive pressures to cause hedging on specifications, especially when it is known that it is extremely difficult for the consumer to check the performance of the delivered system in such a way as to *prove* that specifications have not been met. *It cannot be overstressed that adequate sound reproduction for foreign-language instruction requires a quality standard second only to that of high-fidelity professional recording and reproducing equipment, much higher than that needed in applications whose primary requirement is the intelligible reproduction of native-language speech.* Failure to meet language laboratory specifications which set these higher quality standards can have even more far-reaching consequences than the obvious ones of inadequate sound and frequent breakdowns. The validity and effectiveness of an entire instructional program can be endangered, and it is but an easy step to the unwarranted assumption that inadequate *hardware* is the same thing as inadequate *method*. The seeds of this confusion have already been sown." (Ha 3, Ch. V, italics his.)

26

Q *Is there a good lightweight portable tape recorder for classroom use in language teaching?*

A No. Unfortunately, weight and good quality pretty much go hand in hand. The light portable machines usually operate at a very slow tape speed and have such poor overall quality that they seriously distort or completely drop out many consonants, though they still have intelligibility enough for use as dictating machines, for which they are intended. —W. N. LOCKE

ADDENDUM 26: Professor Locke's statement about weight and good quality is still generally valid. To determine the quality of a specific machine, one must

take the same kinds of precautions as those suggested for an entire system. *See* Question 25.

27

Q *Some machines use cartridges rather than tape reels. What are the advantages and disadvantages of this system?*

A The advantages of cartridges rather than tape reels as I see them are: (1) Less skill is required to insert and remove cartridges; (2) There is less possibility of tangling, tearing, and doing other damage to tape; (3) The cartridge-housed tape will repeat itself indefinitely without rewinding or other attention; and (4) Cartridges are particularly useful for playing very short selections which would have to be recorded several times on ordinary reels in order to avoid excessive work and loss of time in rewinding.

I would put present disadvantages of cartridges as: (1) The initial cost is much greater; (2) With most present equipment it is usually best for the student to have maximum control of the material he is working with. Cartridges cannot be reversed for the replay of small segments of the tape; and (3) Despite recent improvements there is still evidence that some cartridges are not mechanically perfect and have to be discarded because the tape "binds." —A. B. GAARDER

ADDENDUM 27: For the reasons given above by Dr. Gaarder, Hayes finds the cartridge system currently less advisable than the standard two-reel system in which the tape is manually threaded past the heads. He finds it impossible at present to formulate exact specifications for cartridges. (Ha 3, Ch. V)

28

Q *How can I operate the mechanical and electronic devices expertly? Do I have to be a "mechanic" to run the equipment?*

A The only way to operate expertly is to read with great care the manual which accompanies the equipment, perform each step of every operation until you know it so well you can do it with your eyes shut. It helps to be mechanically inclined, but if you can drive a car you should be able to operate a tape recorder, and cooking is ever so much more complicated. The "secret" for everyone is to work alone with the equipment until every movement becomes automatic.

—W. N. LOCKE

ADDENDUM 28: Professor Locke's "secret" is one basic answer. Another is that, for both laboratory and class procedure, an effective teacher has the understanding and the will to learn and perform complicated mechanical and pedagogical routines. Such routines are "hard" and "strange" at first; later they become "mechanized" and "boring." In fact, given sound methods, materials, and equipment, they are none of these negative things, any more than steering and applying the brake in a car is "mechanized," or giving the same orientation material each year to the raw beginners is "boring." The well-prepared, alert teacher learns to do these essential things efficiently and gladly, knowing that without them he and his charges will arrive late, damaged, or never at the appointed goal.

See also Question 11 on how teachers can be trained to understand and use laboratory equipment.

29

Q *How regularly should the equipment be checked? What devices are needed? Do servicemen need special training?*

A It is imperative that provision be made for routine preventive maintenance. Some parts of the equipment should be checked regularly every week, some every semester, others every year. For example, on the recorders which are in constant daily use, the recording and erase heads should be cleaned every day. Manufacturers' service manuals plus experience should reveal what equipment needs the regular routine maintenance and how often. Certainly every tape recorder should be completely checked and overhauled once annually. In any case routine checking, instead of waiting for breakdowns, will definitely prove more efficient and economical. In decreasing order of importance, the following test equipment is useful to the proper maintenance of any language installation: (1) vacuum tube voltmeter; (2) audio oscillator; (3) AC vacuum tube voltmeter; (4) oscilloscope; (5) harmonic distortion analyzer; (6) audio analyzer; (7) tube tester; (8) flutter bridge.

Servicemen should have adequate knowledge of audio amplifiers, the circuitry involved, and the ability to follow wiring diagrams. At college level this knowledge is usually found in students with electronic training gained during their experience in the armed service, among hi-fi enthusiasts, and electrical engineering students. Of course, cooperative staff members in the physics and electrical engineering departments can also be of help. Very few people have had any previous experience with the tape transport mechanisms used in tape recorders. However, the service manuals available with the equipment, and experience gained on the job, are usually adequate for good service work on this part of the machine.

—J. COLLINS ORR

ADDENDUM 29: See Question 14: "How would a small school which cannot afford technicians meet the problem of maintenance?"

What About Materials?

30

Q *Where can I find good teaching materials for class and machine use?*

A The Foreign Language Program of the Modern Language Association published in September 1959 a *Materials List* for the teaching of those languages commonly offered in American schools. The list includes recordings and visuals as well as books and other materials. Requests should be addressed to: Foreign Language Program, Modern Language Association, 70 Fifth Ave., New York 11.

By way of further comment we quote from the CCSSO *Purchase Guide:*

"There is an almost total lack of adequate teaching material suited to the new methods being adopted in modern foreign language teaching. Traditional 'book-centered' materials, even when accompanied by recordings, are never more than half satisfactory. We may as well face it, there will be several years of trial and experimentation before adequate material will be generally available. Meanwhile, teachers and administrators should be patient, reserve judgment on the effectiveness of electronic installations, and not expect them to produce as good results as they will certainly produce when equipped with good materials. As this *Purchase Guide* goes to press, some individuals, publishers, schools, and school systems are planning to create new class and laboratory materials. Those in charge will do the profession a great service if they will send specimen materials and a brief description of their projects to both of these information centers: Foreign Language Program, The Modern Language Association, 70 Fifth Ave., New York; and Dr. Marjorie C. Johnston, Specialist for Foreign Languages, Office of Education, Washington 25, D. C." —F. E.

ADDENDUM 30: It is a source of great satisfaction to say that in 1962 the entire 1959 answer to this question must be re-written. Well-led and powerfully stimulated and financed by Titles VI and VII of NDEA, enriched by the knowledge and efforts of many individuals and institutions, the profession has changed the whole materials climate in three short years. Now on the market and in wide use are the beginning levels of several sets of sound, effective materials for the languages commonly taught in American secondary schools. Not the least of their many qualities are, first, that they make the close integration of class and lab work inevitable, and second, that their aim is the efficiently ordered development of all four language skills: understanding, speaking, reading, writing. The succeeding levels of these sets are appearing regularly and competing sets have been announced. It is a very encouraging picture. (See under "Language Teaching Materials," Orr bibliography, pages 647-48.)

At the grade-school level, where foreign language teaching, for a number of reasons, is more important and more difficult than at any other level, the materials thus far produced are not as numerous nor as likely to be widely satisfactory as those for the secondary level. To my knowledge, the most important problem has not even been attacked in any effective way—the problem of a reasonably priced, structurally sound, sequential set of materials beginning in the early grades and continuing through high school. But this challenge will eventually be met, hopefully with greater success than the challenge of the junior and senior high school level. (See the Randall article in this issue for an encouraging account of work done and in progress, especially in the difficult and controversial area of FLES by TV.)

Almost as important as the appearance of effective new materials themselves is the recent formulation of professional criteria for use in preparing and selecting them. The criteria have been published as an appendix to the 1962 *MLA Selective List of Materials, for use by Teachers of Modern Foreign Languages in Elementary and Secondary Schools* (MLA). (The usefulness of the List and the criteria at the college and university level is considerable, by the way.) The criteria were developed in a series of work papers, discussed by a special MLA conference in October 1960, and have undergone considerable criticism and revision. They will surely be reviewed and revised again before the next edition of the List.

Following the adoption of the criteria in January 1961 came the prodigious work of the evaluating committees, organized, chaired, and staffed with the cooperation of the various AAT's (American Association of Teachers of French, of German, etc.). There were 10 committees, one for each language, having a total membership of 184 teachers. Altogether they evaluated 2400 items, admitting 1850 to the 1962 Selective List as at least minimally acceptable.

In his introduction to the List, Donald Walsh, director of the MLA FL Program, pays tribute to the "innumerable people whose wisdom, devotion, and zeal made this edition possible," naming in particular the 184 evaluators, their 10 chairmen, a dozen members of the MLA FL staff, and finally "Mary J. Ollmann, the editor, whose patient persistence brought order out of chaos" in recurring mountains of detail. He goes on to say, "Like all other compilers, we are sure that our list will prove to have errors of commission and of omission. Some excellent materials were published too late to be included; others were omitted because they are not generally available; a few others were left out through ignorance or neglect, despite the diligence of most evaluators. We will be grateful for your criticisms of the list as a whole and for titles and publishers of materials that you believe should be in the next edition, though they fail to appear in this one." (MLA v-vi).

A professional handbook of such scope could not possibly leap in its second edition to a status of impeccable criteria or complete coverage of items. (The 1962 List supersedes a non-selective Materials List prepared and published in the incredible space of three months, June-September 1959, under the editorship of Douglas Alden.) But we are well on our way toward what high achievement is humanly possible, and the profession is equipped in the materials field with a fine tool sadly needed for a long time.

In spite of the great progress made, we are far from perfection in the materials now on the market. What has no place in the criteria, and what, some day, must be the subject of another professional handbook, is the complex set of problems facing a materials development team as they begin their work. (The teams that have produced materials thus far have not faced all the problems. If they had, the materials would still not be on the market, and might not yet be out of the planning stage.) The list of problems below is not exhaustive, but it will suggest the complexity of the interweaving elements in a set of really good materials. Many of these elements, e.g., the order of presenting structure and vocabulary items, must be thought through almost in their entirety before the first situation is chosen

or the first drill designed. This means that the shape and the content of the upper levels have to be pretty well projected before Level I can be written. The entire operation demands a thorough knowledge of the American child; the American school system; the structure of the native language and culture; the structure of the target language and culture including its literature; the art and the science of making teachers' manuals, tape and disc recordings, student manuals, visuals of all kinds, and tests of various types.

Here is the list of problems, with no particular importance attached to the order of their presentation. The question in each one is, How to:

1. Present dialogue, narrative, and other situations that will surely interest all students of the age bracket for which the materials are intended;

2. Present material that is teachable by the instructors presently teaching in the schools: preferably after some special training, but in any case successfully by following with care the teacher's manual;

3. Present only language that is authentic, i.e., as used in the target culture;

4. Present the sound system of the target language so as to insure early near-native control by each student;

5. Present items of structure by order of frequency in normal use in the target culture: first, the structure of the spoken language; later, the structure of its written forms;

6. Present the target structure to the student so that early, and continuously through the entire course, he grows in ordered awareness and control of its various parts and of their interrelationships;

7. Present items of vocabulary by order of frequency in normal use: spoken, written (like items of structure in No. 5 above);

8. Present the meaning of new vocabulary by the most effective means in each case: visuals, teacher or pupil dramatization, English equivalent, etc.;

9. Present as early and as often as possible items from the target literature, popular and classical. Such items used early in the course must contribute directly to control of the language for communication.

31

Q *What kinds of recorded materials are needed for use with the machines?*

A-1 This is a crucial matter. Its importance to effective language learning can hardly be exaggerated. We list first several kinds of recorded materials (with the student activity in parentheses): for listening only (the student builds up aural comprehension and "speaking readiness"); for repetition (the student mimics what he hears, drilling good pronunciation and other elements of good language habits); for manipulation of forms and patterns (here a great variety of exercises is possible, ranging from drilling a verb tense to a complex question-and-answer sequence); for testing (see the answers by Paul Pimsleur under "Evaluation," page 622).

Secondly, we point out that oral drills and exercises are quite a different thing from those found in the traditional textbook. For examples we refer to Patricia O'Connor's *Modern Foreign Languages in the Secondary School: Prereading Instruction*, and the sections on pattern practice in the 1958 and 1959 Northeast Conference Reports (see page 647). —F. E.

A-2 A variety of exercises should be used during each laboratory period. Drills should be prepared in a manner which will require the student to concentrate on *meaning* as well as *pronunciation*. Text books should be closed during most of the laboratory session. Aural-oral proficiency is gained through oral practice, not reading. Only vocabulary and idioms of the highest frequency should be used, and limited to a small number of new items per lesson. Previously learned vocabulary should be repeated frequently in later laboratory periods. In a language laboratory, there should be several opportunities during the period to play back the recorded exercises, but to avoid monotony each playback should be brief (not more than three or four minutes).

—C. R. JEFFERS

ADDENDUM 31: See Addendum 30.

32

Q *What criteria are useful in selecting pre-recorded or in preparing recorded materials?*

A-1 Both types should be technically well recorded, and the language should be authentic and typical of conversation by cultivated native speakers. The speaker should not slow down or yield to the temptation to talk like a book. (For example, some speakers on French discs use the past definite tense.) When choosing materials for your own recordings, assume that students will keep their books closed. (Otherwise the printed word will override the spoken one.) Mere listening to the verbatim recording of the students' textbook is rarely profitable; interest lags unless some variation is introduced with questions to follow.

In general, frequent student responses are necessary to keep attention at high level. Each response should be immediately followed by the master voice giving the correct response, thus correcting or corroborating the student. Such drill should not, after the initial stages, involve mere repetition. Questions and pattern drill, using the principle of minimal-step progression, can involve dozens of variations. A good recording voice (or "personality") is essential. The voice must be pleasing, alert, interested and interesting. A soporific voice will induce sleep in any language. —E. H.

A-2 When recordings are made, reading from a printed or typed page almost invariably results in unnatural speech—unless the voices are unusually well trained or coached. In addition to *speed* (mentioned above) there are many other pitfalls, the worst of which is *intonation*. Listen, for example, to the question intonations; if they are all rising at the end, it is reasonably certain that the recording was made by voices poorly trained or coached. (Rising intonation usually

calls for a Yes or No answer. A great many question intonations fall at the end.) A feature such as *liaison* in French can be very revealing: if it is used too frequently you can be sure that here again is unnatural speech.

—F. E.

ADDENDUM 32: See Addendum 30.

Techniques

33

Q *Are not the improvements seemingly wrought by electronic installations really attributable to the greater effort and energy expended, and to the enthusiasm engendered by new equipment and novel techniques? If so, will not these effects deteriorate with familiarity to a point of no more stimulation than a textbook? In short, how is motivation introduced and maintained in the use of equipment?*

A First, the instructor must be sure that the student understands the purpose of the equipment, that it is a drill master and not a fascinating toy. He must prepare the student to expect much repetition and even fatigue from a good "mental workout" in his drill period. He should impress on the student that, as in learning any skill in sports or music, language learning is also the development of a skill and requires consistent practice. Second, the instructor must prepare the student for the work and give him a purpose for learning whatever he may find on the recording. A suitable conversation involving the recorded material is one way of doing this. During the class following machine drill, the instructor must check on the work done: perhaps hold a conversation involving the pattern studied, perhaps an oral test. The former reminds the student of the purpose of the drill; the latter provides an immediate incentive for learning. Both are necessary.

Third, the drills may be varied, but not too much. In a drill period of 30 to 40 minutes, the student may work with several exercises, perhaps a pattern drill on a point of grammar, plus the oral presentation and repetition of a reading lesson, plus questions and answers on this material. Students can both enjoy and learn a song or a poem on tape, provided it has been developed first in class.

Fourth, the period of machine drill should not be too long. Fifteen to 20 minutes several times a day is better than one 60-minute period. If the latter cannot be avoided, then after each 15 to 20-minute period the student should take a break, walk around the room or even leave for five minutes. Fifth, the instructor must prepare the tape exercises skillfully so that they gradually increase in difficulty and so that the student is constantly forced to exert a certain amount of effort to do them well. Finally, the tape is a textbook—an oral one—and serves the same purpose for aural-oral work that the written text serves for reading and writing. If it is a good oral textbook, preceded and followed by good teaching, it will be stimulating.

—Louise Winfield

ADDENDUM 33: To Miss Winfield's comments can be added a few about the teacher himself and his attitudes. First, see Addendum 28 about the "mechanized" and "boring" use of machines. Second, let us face squarely the fact that with the well integrated class and lab materials now available, properly conducted machine drill can put students in class with a high order of lingual control never imagined, much less expected, by a great many teachers. Such teachers too often go on plodding through slow, halting class routines when the students, properly led, could take wing and fly. They are not required to try their vigorous, budding skills in ever freer use of the language; no wonder they are bored. This is but one example of poor articulation between class and laboratory work; sometimes the class has vitality and purpose, and the lab work is poorly organized or indifferently led.

Third, in the fast, repetitive oral drills of class and laboratory, there is always the danger of hypnosis by chanting choral work and the apparent sameness of line after line of dialogue or drill. Teacher and students alike get not only a glazed eye, but also a glazed ear: no one is hearing accurately any more. But if the teacher is properly trained and/or self-schooled, he hears in every single response, choral or individual, something significant for that moment, that student, that group. In a split second he decides whether it is worth stopping to praise or correct, or makes a mental note for later comment. The students soon develop a keen, critical edge to their hearing, and a "boring" drill session in class or lab is almost an impossibility.

Finally, every teacher using the new class and laboratory materials and techniques should be submitted, or submit himself, to the experience of learning to understand and speak an entirely new language successfully, if only for a few weeks. In this way, as in no other, he will become aware of all that is involved: possibilities and impossibilities, problems and advantages. The "shock language" course is an important part of most NDEA FL Institutes.

See Hutchinson (Hu) especially pages 38-43, "Teaching Techniques," and Question 39.

34

Q *What is a good division of class time? How long can students drill (listen and respond) without reaching the point of no gain or mental fatigue?*

A On the junior high school level, 10 to 12 minutes of concentrated drill seems to be about all the student can take. I should think that high school students could profit from 15 to 18-minute sessions. There is a variable here in that the type of lesson makes a lot of difference. A drill on grammar forms only, for example, will tire the students quite rapidly. A passage to be memorized will sometimes be practiced two or even three times in a row by the same students, constituting a lesson of well over 30 minutes. —Lester McKim

ADDENDUM 34: For secondary schools there seems to be general agreement that *daily* practice in relatively short sessions (not over 30 minutes) produces the best results. College students can work longer.

35

Q *How many times a week should a student use the equipment? What seems to be the minimum for good results?*

A The nature of the work determines the optimum frequency. To teach active control of the language, that is, when the drill involves listening and responding, or listening, responding and recording, best results are obtained by frequent short practice sessions. The best schedule would allow 15 to 30 minutes of drill daily. If the exercises are sufficiently short, several repetitions may be possible in this time. If the student is required only to listen without responding, then a minimum of one period each week may suffice. Here the student may develop skills in listening comprehension. To learn to speak he must spend time on drill and active use of the language, both of which cannot occur in a listening installation. Whatever the schedule, drill sessions should not be longer than 50 minutes. Fatigue and short attention span may actuallly hinder learning when the work is prolonged further. —DON IODICE

ADDENDUM 35: See Addendum 34, also Addendum 13 on the inadequate FL laboratory capacity of many schools today. A typical school installed a small lab a few years ago, has been using it once a week with no serious problems, and now, with new materials demanding daily practice by every student, finds its language program seriously under-equipped. This is an administrative problem, and the school principal and superintendent should be made aware of it.

36

Q *How often should a student record his own voice?*

A-1 Not having a statement from the proponents of substituting the use of activated earphones for recording and playback (substituting in large part, not wholly, as we understand it), we refer to Professor George Borglum's article, "Consign the Mistake to Oblivion," in the *Maine FL Program Newsletter* for May 1959. The principal points made are: (1) The simplest listening installation with dead (not activated) earphones brought "a solid, measurable gain in student achievement"; (2) Machine drill is most useful to the elementary student; (3) The elementary student is least able to criticize his own performance; (4) Playback by an elementary student is largely a waste of time; (5) The saving of playback time makes it possible to repeat an exercise more often; (6) "Since we recognize the principle of unconscious memorization we have always been uneasy about the student memorizing his own mistakes," Professor Borglum writes. "Instantaneous self-monitoring of unrecorded speech concentrates on imitation of the correct form while consigning the mistake to oblivion." —F. E.

A-2 This is a moot point. Until very recently it was commonly assumed that recording and playback were a unique and highly valuable learning experience, and should therefore be used daily. Now comes the suggestion that it is a form of testing rather than learning, and that it may be used only occasionally. For the learning experience, it is proposed that the activated earphones be substituted for recording and playback. Clearly these are two different things, and there is, as yet, no proof that they are interchangeable. Research is needed, and will doubtless be undertaken. Meanwhile, the teachers who consider that recording and playback provide a unique and valuable experience in learning and self-criticism will use it as frequently as their facilities permit. —E. H.

ADDENDUM 36: See Addenda 20, 22, 23, where the advantages of the various kinds of systems, simple to complex, are discussed.

37

Q *What are the advantages and disadvantages of the language laboratory as compared to the electronic classroom?*

A The laboratory provides recording and playback, enabling the student to hear his own voice with complete objectivity and to give his undivided attention to a comparison of his responses with the model voice. This is a unique experience, and a highly valuable one. Expert teacher guidance can enhance it by training the student to listen for certain fine distinctions of sound. It also provides individual manipulation of the listen-record-playback facilities, thus accommodating individual differences in rapidity and method of learning and kinds of materials needed.

One disadvantage is, of course, that additional equipment involves more time invested and more expense in cost and maintenance. However, as in science laboratories, the results seem to justify the cost. And the per-student cost is less than for science (or athletics, for that matter). Other disadvantages are that constant teacher supervision is impossible, and only well-trained and well-motivated students—usually older ones—are able and willing to get full value out of individual laboratory work. —F. E. AND E. H.

ADDENDUM 37: See Addenda 20, 22, and 23.

38

Q *Should audio aids perhaps be limited in the self-training of the teacher in the elementary grades?*

A Audio aids should be a major help in self-training of the classroom teacher but should not be limited to the teacher alone. Nor should the audio aids which the teacher uses be the same as those used for the children. Let us assume that the teacher is an American with limited facility, if any, in the foreign language. Her own tapes and materials should be more rigorous, with detailed drill and emphasis on conducting classroom experiences in the foreign language. Such a teacher may well attain near-native audio-lingual ability, but rarely that of the native. Therefore, children should not get their foreign language second hand when electronic equipment and materials can give them first-hand language experiences. This is extremely important at the elementary level where skill learning must be presented authentically from the very beginning.

Foreign language tapes and records made for the elementary grades can open up new worlds to children. Motivation is immeasurably enhanced. Children are eager to listen and to learn from voices other than the teacher's. This is especially true where the teacher exchanges tapes with children of similar age from the country whose language is being taught, and when the recordings use children's voices. —EMMA BIRKMAIER

ADDENDUM 38: See Addendum 6, the study of this question by Mrs. Galas (Ga), and Earle Randall's article in this issue.

39

Q *Do the discipline problems incidental to the use of electronic equipment counterbalance its value as a teaching and learning aid in the elementary and secondary school?*

A The discipline problems arising in a classroom are of course part of the total pattern, so it is difficult to state baldly that any one factor, be it new technique or mechanical device, is of itself cause or cure. Some pupils will undoubtedly find the mechanical devices more fascinating than the language, but these pupils may easily be the ones who in the past have preferred the peregrinations of a fly on the ceiling to the development of a new sentence pattern. Then there are those who may be inept or uncoordinated, who will have difficulty with the mechanism; but this problem is being overcome by the manufacturers, who are constantly simplifying the equipment and making it even more child-proof. Again, the problem children here are the same pupils who in other classes stumble over their own feet and drop all their books as a matter of routine.

I believe that in most cases the electronic equipment is a tremendous help to the teacher in solving classroom difficulties. For one thing, the pupil achieves what we can call psychological isolation. By means of earphones, which allow neither extraneous noises nor escape from the teacher's voice, the pupil soon finds himself in a one-to-one relationship with his teacher. Also he finds that the teacher's voice (recorded) will patiently repeat time after time the material to be learned, and each time, the teacher's voice is filled with equal enthusiasm. Then, if the pupil has a question, he has only to raise his hand, or flick a switch, and his teacher is at his side in person or is talking with him over the intercom. If he does find himself distracted in spite of all, he again finds the teacher (no longer chained to her desk) free to exercise the necessary control, to encourage, to lead, to recognize him as an individual. —RITA BARROWS

ADDENDUM 39: See Questions 28 and 33 on teacher and student motivation in the use of electronic equipment.

40

Q *How can students be trained to understand and use the equipment?*

A They can be trained by being shown and then by practicing under proper supervision. The first period should be an orientation session. Students should be told what skills they are to acquire and how the equipment will help them. They should know how they are going to be tested on drill work done. This is to make them feel the importance of drill, and to interest them in the advantage it will offer them. Careful explanation and demonstration of the equipment at the outset will save time later on. The time needed for this will of course depend on the complexity of the installation. In a laboratory of 15 booths where each student is handling a tape machine, I have found that half an hour is not too long. The student must learn not only things to do but also things not to do. Most American students are sufficiently gadget-minded to catch on quickly.
—JOHN B. ARCHER

ADDENDUM 40: In addition to Mr. Archer's practical advice, see Questions 28 and 33.

Evaluation

41

Q *Is there any measure of the effectiveness of electronic equipment?*

A I do not know of any specific research which has been reported as measuring quantitatively the effectiveness of these facilities. That electronic facilities do increase the rate and amount of learning of aural-oral skills is evident from the rapidly increasing use of such installations during recent years. Probably the most valuable research will be that which will identify the *specific* activities or techniques bringing the greatest results. —FRANK GULICK

ADDENDUM 41: In Politzer's article, "Assiduity and Achievement" (Po), there is a report on two large groups of beginning French students, one of which had laboratory work, and the other of which did not. The most important finding of the study was that willingness to work in the laboratory always resulted in a gain in the student's grade and avoidance of failure, whereas long hours of homework in the traditional course had no such sure effect: many "hard workers" failed it. In the author's words, "Just as in any other subject, the individual student achievement in foreign language is determined by his aptitude and his willingness to work. We teachers have no control over our students' aptitudes—but we can make sure that their efforts are not wasted. One of the most important functions of the language laboratory seems to be that it can give the individual student the opportunity to make his effort count. The providing of adequate laboratory facilities and laboratory programs is evidently a pedagogical necessity as well as a moral obligation." (Po 16).

In further answer to the question above, two remarks: First, the effectiveness of electronic equipment is determined mostly by the quality of the teaching materials used, by the extent to which class and lab programs are integrated, and by the effectiveness of lab procedures. Second, a mountain of research findings,

published or soon to be published, by the Language Development Section, Title VI, NDEA, underlines in various specific areas the effectiveness of machines in language learning. A summary of these findings could easily be the subject of an entire article.

42

Q *Isn't electronic equipment a waste of money and time with the present textbooks and courses of study?*

A If the present textbooks and courses of study produced the desired results, the use of machines would not now be making its appearance so widely, nor be welcomed so enthusiastically by thousands of schools. Alone, the equipment is not the answer, either. However, if it is used wisely, even with current textbooks and methods, equipment may very well be the factor which brings success. The use of electronic equipment can prevent or solve certain problems:

1. *The shy child who fears to speak the language in class.* He will not mind doing it, isolated by earphones or a booth, and eventually he will gain the courage to participate in class conversation.

2. *The child who misses part of the work.* Busy teachers cannot spend much time bringing absentees up to date. Machines can work indefinitely.

3. *The easily distracted child.* The mechanical setup and enforced frequent participation required by machine drill keep his attention on the lesson.

4. *Errors by individuals.* The teacher can correct these without disturbing other pupils. Contagion is thus prevented, and pupils will not catch errors from each other.

5. *The class with wide extremes of ability.* Varied groups can work on different materials at the same time in the same room.

6. *The teacher who misses classes.* In an emergency the children can continue much of their work by spending more time with the machines, if proper materials and notes on their use are available.

7. *Dependence on one teacher's resources.* The use of recordings widens the child's learning opportunities, copes with individual problems without time loss to others, and provides a much greater variety of learning experiences than the average language class has been able to do.

8. *Dependence on one teacher's pronunciation and diction.* Recordings can bring any number of new voices to the students' ears. —VERA L. PEACOCK

ADDENDUM 42: For the teacher still saddled with outmoded texts and courses of study, but able to use some electro-mechanical equipment, there are at least two good solutions: First (after study and observation of sound materials), design and make drills to supplement the text in class, and when they have proved their validity there, record them for machine drill. Second, purchase some of the supplemental aids now on the market for use with, or in addition to, a traditional text. One that comes to mind is on tape: Theodore Mueller's *Pattern Drills in French,* Wayne State University, ML AV Research Project, Detroit. There are others, on tape and on discs.

43

Q *What criteria shall be employed to measure progress in language usages and fluency?*

A These remarks will deal with tests of listening comprehension and speaking. Teachers may test listening comprehension by reading a paragraph to the class twice, at normal speed, and then asking questions about it. Answers to the questions may be written, or may be spoken and recorded. In scoring, place the emphasis on whether or not the student has grasped the meaning of what was said, rather than on the grammatical correctness of his response. A standardized test of listening comprehension exists in French, German, and Spanish (published by the Educational Testing Service, Princeton, N. J.). Teachers will do well to examine the ETS test and adapt its methods to their own situation. A different test of this ability, the Pictorial Auditory Comprehension Test, is now being prepared for a number of languages by John Carroll (Harvard) and myself.

To test speaking ability, the teacher should try to analyze the students' spoken performance into a number of parts, rather than just grading on "how well" he spoke. For example, separate and independent scores should be given for pronunciation, grammatical correctness, fluency, and perhaps originality. These scores can then be combined into one overall grade on speaking proficiency. Compare also the Colgate test (see article by Stabb, *Modern Language Journal,* May 1955), and a test reported by W. V. Kaulfers *(MLJ,* February 1944). I have prepared a standardized test of speaking proficiency for French. Another recent speaking test is that of Nelson Brooks (Yale).

It must be stressed again and again that the teacher who does not allow a large place in her marking system for listening comprehension and for speaking proficiency is simply marking her students unfairly.

—PAUL PIMSLEUR

44

Q *What standards should be attained?*

A It is not possible to prescribe here what achievement should be expected at each successive level of each language. Still, certain general considerations may be mentioned. Elementary language students cannot be considered to "know" something unless they can produce it aloud, correctly, easily, and with a good accent. The ability to write things down in the foreign language is not enough. Thus the emphasis at each level of study should be on the complete assimilation of a limited body of material. Greater scope can be attained by the process of generalizing by analogy, in which the student creates new utterances, similar in structure though different in content from those he has learned. Thus, progress at various stages should be measured not by the number of lessons covered, but by the student's readiness to produce utterances which utilize the grammar and vocabulary that have been studied. Standards should be established to reflect an ever-increasing command of the spoken language. —PAUL PIMSLEUR

Q *If more emphasis is put on oral work and the grammar suffers, will the colleges revise their entrance requirements accordingly? How many periods a week can the student devote to oral machine drill and still prepare himself to pass the college boards?*

A Beginning in March 1960 the College Entrance Examination Board will include listening comprehension tests in modern foreign languages in its regular testing program. This along with other developments shows the current trend of thought on the question. The root of all aspects of language is the spoken word. Without extended practice in it, most students never learn to handle effectively any aspect of language, spoken or written.

A student who has good preparation in the spoken language should be encouraged to go to a college whose language program is adequate and receptive to the full scope of his skills, abilities, and interests. —F. E.

ADDENDA 43, 44, 45: See Paul Pimsleur's article on tests in this issue, Robert Lado's *Language Testing* (La), and the report on tests in the 1959 *Northeast Conference Reports* and *Supplementary Reports*.

Programed Learning

OF ALL THE NEW DEVELOPMENTS in the use of machines for foreign language learning, the one currently most discussed is programed learning. In 1959 only a handful of FL specialists had heard of it. Now this field, rich in potential and in pitfalls, is being intensively cultivated by a number of experts—and, unfortunately, by some who are not so expert.

Perhaps the first word to say about programed courses for FL learning is, *Beware*. Very few of the programed courses now available exemplify the application of both sound principles of programed learning and sound linguistic analysis. All of these courses, by the way, are at the elementary level. The only guarantee against being disappointed by poor materials, and the only assurance of dependable advice, is to rely on the professional literature for guidance.

At the moment the principal contribution of programed learning to the FL field seems to lie less in the immediate production and use of materials than in the shaping of professional thought and attitudes. That is to say, a teacher or materials development staff member, pondering the principles and techniques of programed learning, is likely to become more keenly aware of the actual problems he faces, and more precise in his goals and efficient in his work. That, plus the trial and evaluation of the sound materials available, is about all we can hope for in the next year or two.

These readings are suggested: (1) F. Rand Morton's "The Language Laboratory as a Teaching Machine" (Orr bibliography, page 645); (2) the 1962 Northeast Conference "New Look at Learning" and its bibliography (Ha 4); (3) Victor E. Hanzeli's "Programmed Learning in French: Work in Progress," in *French Review* XXXV: 587-89; No. 6, May 1962.

Bibliography

THE entries in this bibliography are listed again in complete detail in the Orr bibliography beginning on page 644. They are listed in brief form here for the reader's convenience. The star (*) indicates material of greatest usefulness, to be read first and kept handy for reference.

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